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(71) Applicant *(for all designated States except US)*: NEC CORPORATION [JP/JP]; 7-1, Shiba 5-chome, Minato-ku, Tokyo, 1088001 (JP).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: ZALIO, Filip [CZ/AU]; 4/4 Florence Street, Glen Waverley, Victoria, 3150 (AU). DOBRICA, Vasic [AU/AU]; 6 Cascade Drive, Vermont South, Victoria, 3133 (AU).

(74) Agent: IKEDA, Noriyasu; The 3rd Mori Building 4-10 Nishishinbashi 1-chome, Minato-ku, Tokyo, 1050003 (JP).

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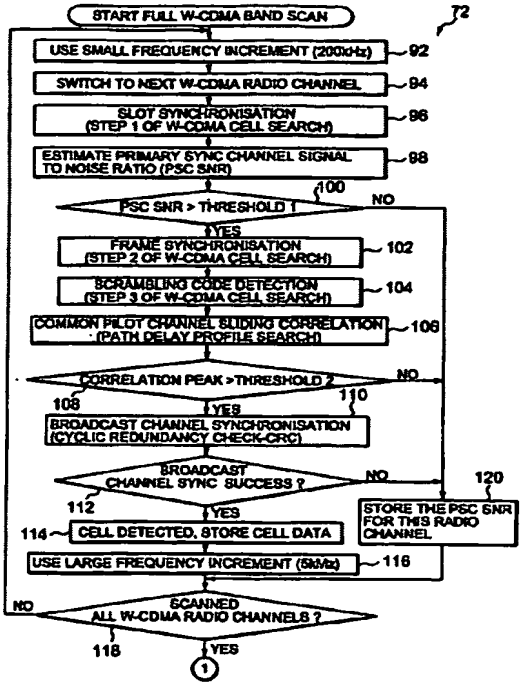
(54) Title: CELL SEARCH PROCESS FOR WIRELESS COMMUNICATION SYSTEM



(57) Abstract: A method of cell search in a wireless communication systems having a plurality of base stations and a mobile station, each of the plurality of base stations serving a separate cell within a service area and transmitting a common primary synchronisation code (PSC) in a primary synchronisation channel within a slot of a radio frame, the method including the steps of: (a) scanning (72) through radio channels in scanning increments corresponding to a standard channel raster; (b) estimating (98) the PSC signal-to-noise ratio of each radio channel; (c) if a PSC signal-to-noise ratio is above a first predetermined threshold level (100), completing a cell search procedure including slot synchronisation, frame synchronisation and scrambling code detection steps for that radio channel; (d) if the cell search procedure is successfully completed (112) for the radio channel in step (c), increasing the scanning increments to the broadcast frequency separation between cells; (e) when all radio channels are scanned in step (d), sorting (74) the scanned radio channels in descending order by PSC signal-to-noise ratio; and (f) performing (76) the cell search procedure on each sorted radio channel in descending order.

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